February 16, 2016

Ms. Kyra Moore, Director
Air Pollution Control Program
Missouri Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102

Re: Modeling and Monitoring SO2 Characterization for the Labadie Energy Center

Dear Ms. Moore:

On September 3, 2015, Ameren Missouri, submitted comments in support an SO2 classification of "Unclassifiable" for the area around the Labadie Energy Center. As part of those comments, Ameren submitted an AERMOD modeling analysis using both default and beta options. As a follow up to that information Ameren is submitting additional information related to the modeling and monitoring characterization for ambient sulfur dioxide (SO2) concentrations in the vicinity of the Labadie Energy Center. Ameren Missouri with assistance from AECOM is employing a hybrid approach of both monitoring and modeling to characterize SO2 concentrations around Labadie.

Ameren Missouri has installed ambient SO2 and meteorological monitoring sites in areas demonstrated, based on AERMOD modeling recommended by the Air Pollution Control Program, to be representative of areas of higher SO2 concentrations. These sites have been operational since April of 2015 and to date measured air quality data reflects compliance with the SO2 ambient standard. This submittal includes a summary of the measured air quality from these sites for the period of April 2015 through December 2015. Specifically, monitored concentrations are available for an 8-month period and indicate the following: the highest 1-hour SO2 concentrations are 38 ppb at the NW site and 56 ppb at the NE site; the 99th percentile (3rd highest peak daily 1-hour maximum) concentrations are 29 ppb at the NW site and 34 ppb at the NE site. The 99th percentile concentrations are both less than half of the 75 ppb SO2 national ambient air quality standard (NAAQS). Actual monitored levels of SO2 around Labadie obtained through the new monitoring network clearly indicate attainment by a wide margin.

In addition to the measured air quality data, Ameren submits information related to the dispersion modeling approach for the Labadie Energy Center as well as a supplemental evaluation of AERMOD low wind options for several tall-stack databases. This evaluation authored by AECOM indicates the performance of the AERMOD model with low wind options is reliable and, in fact, slightly conservative for the purpose of modeling the 1-hour SO2 ambient standard.

Please contact me at your convenience if you have questions related to this additional information.

Sincerely,

Steven C. Whitworth
Senior Director, Environmental Policy and Analysis

Attachments

Cc: Michael Jay – USEPA Region 7